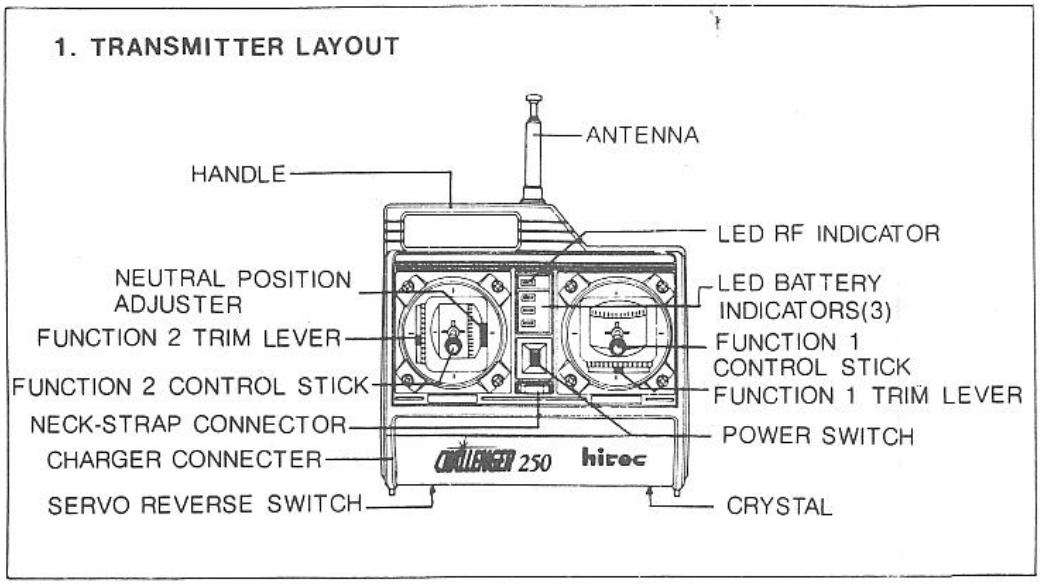
Jameco Part number

TRANSMITTER

- Super-heterodyne digital proportional
- Servo reversing switches
- Charger connector for optional NI-CD
- LED indicator for RF output
- LED indicator for battery
- LED low-power flashing indicator
- High power out put
- Adjustable neutral position(external)

A. CHALLENGER 250

- Control stick AM 2 channel radio
- Multi-purpose control stick assembly
- Neck-strap connector
- Spring or ratchet throttle control



2. CONTROL STICKS: GIMBALS

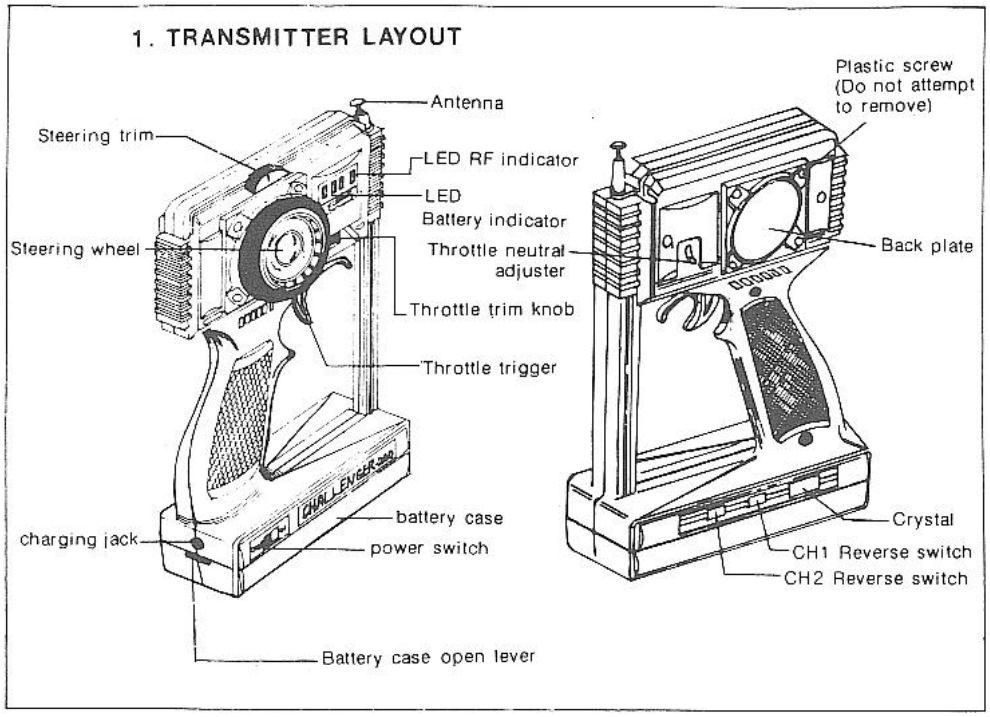
A Spring defeat(must open case)
You may defeat the spring mechanism on the throttle stick by following simple steps as below
1) Remove 4 screws in back
2) Place "SPRING DEFEAT" pin provided
(copper color) on top of gimbal and fasten with enclosed screw
3) Remove spring(please keep this spring for future use)

B ADJUSTABLE NEUTRAL POSITION
You may change the ratio of the throttle to make it 70% forward and 30% reverse simply by pushing adjuster (located right side of throttle stick) down.

Jameco Part number

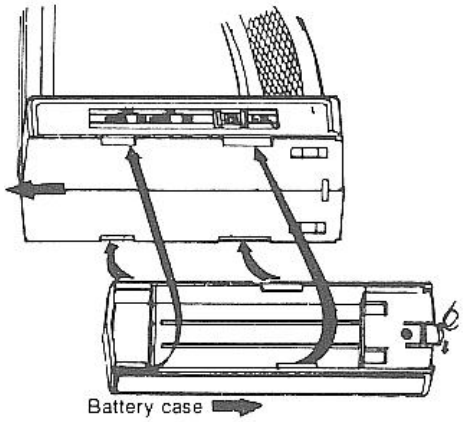
B. CHALLENGER 260

- Pistol-grip 2 channel, AM radio
- Torque-trol strain resistant steering wheel
- New gear type steering movement for accurate control
- Optional rechargeable gel-cell battery pack available



2. BATTERY CASE OPEN LEVER

Push down with your thumb and push out the battery case to remove.

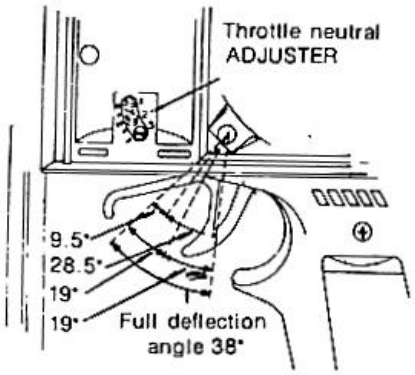


Remove the battery case and load eight alkaline batteries into the battery case in the correct polarity.

Jameco Part number

3. THROTTLE NEUTRAL ADJUSTER

The throttle neutral can be adjusted in any position or 3 step position you desire depending on your application by adjusting this lever. Unscrew the lever first, then adjust and fix at the position you desire by screwing in the lever.

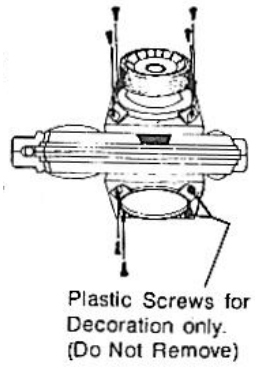


When set to 1, the full dellection angle is 38°
When set to 2 the throttle throw is 28.5° and brake dellection angle is 9.5°
When set to 3, the throttle and brake(reverse) throws are both 19°

- For engine cars, position 2 is recommended.
- For electric cars, position 3 is recommended when equipped with reverse. mechanism and position 2 is recommended when equipped with a brake and forward only

4. BACK PLATE

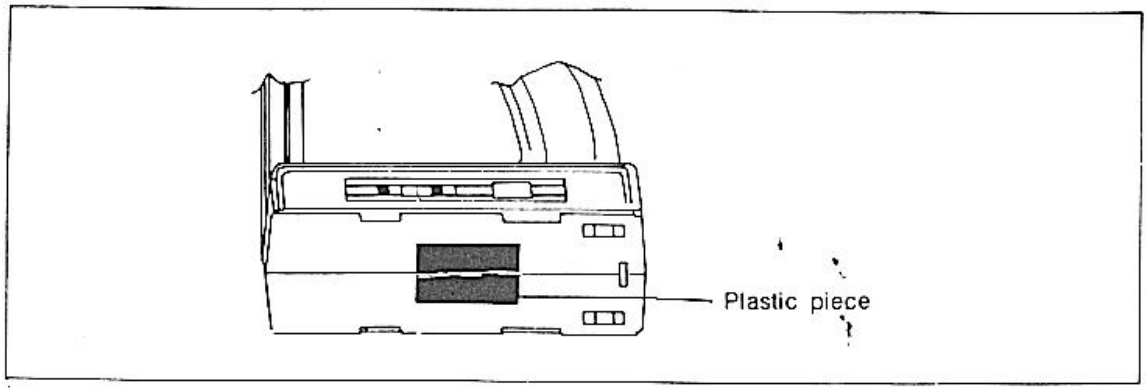
You may wish to turn around the wheel movement to the back side
If you are left-handed Please take following steps to reverse the wheel movement.
Remove 4 screws from the front wheel movement.
The wheel movement will come off easily.
Remove only 2 left screws from the back plate. This is very important, because the 2 right screws are plastic screws which are decoration purpose only.
Attach wheel movement on back side by screwing in 4 screws back.
Attach back plate to the front side by screwing in 2 screws.



Jameco Part number

5. SPECIAL PROVISION

If the battery size that you are using are thicker than standard size, you may find the battery case does not fit.
In that case remove the black plastic piece from the bottom of the transmitter
Please remove this plastic piece when installing optional Gel-Cell battery pack



C. CHALLENGER 250/260 TRANSMITTER

1. ANTENNA
Always extend antenna fully when operating.

2. CHARGING JACK(12V) ⊕—◎—⊖
When using optional Ni-Cad batteries or rechargeable gel-cell pack plug in the transmitter charging jack here. set the power switch to "OFF" position to start charging.

3. LED BATTERY LEVEL INDICATOR(3.POSITIONS)
When fresh batteries are put in indicator will be at "high" and after a while move to "normal" However if battery level drops to "low" which will start to flash, then immediately change to fresh alkaline batteries or charge Ni-Cads.

4. LED RF POWER INDICATOR
When this light is on, it means transmitter is transmitting radio signal.
If this doesn't light up, check for broken crystal or circuit damage.

5. CH 2 SERVO REVERSE SWITCH(THROTTLE SERVO)

6. CH 1 SERVO REVERSE SWITCH(STEERING SERVO)
(IMPORTANT) • Always make sure the Switch is on the extreme position, that they should never be left in the middle.

7. CHANGING FREQUENCIES.
27MHz band set cannot be changed to 72MHz band, or 75MHz band. Challenger paired crystals are precisely matched. Always use a HITEC crystal set(transmitter, receiver) when changing the frequency.

Jameco Part number

8. SPECIFICATION

Modulation system : AM(amplitude modulation)
Power requirement : 9 6V-12V, AA penlight battery x 8
Neutral : 1.310usec.(1.550usec)

RECEIVER

SPECIFICATIONS

- Small, lightweight, rugged, and high performance AM 2 channel receiver
- Narrow band design using a narrow band ceramic filter for resistance of adjacent channel interference.
- Current drain : 15mA at 6 volts
- Dimensions : 2.37" x 1.5" x 0.75"
- Weight : 1.5oz(37g)
- Power Requirement

BATTERY ELIMINATOR CIRCUIT

does not require seperate power source
However, if for special reason, seperate power source is desired, 4.8V Ni-CAD or 4 x 1.5V AA alkaline can be used.

SERVO

This servo incorporates many advanced features, providing high performance and reliability. These heavy-duty & water/dust tight servos are designed for use with Challenger digital proportional radio control sets.

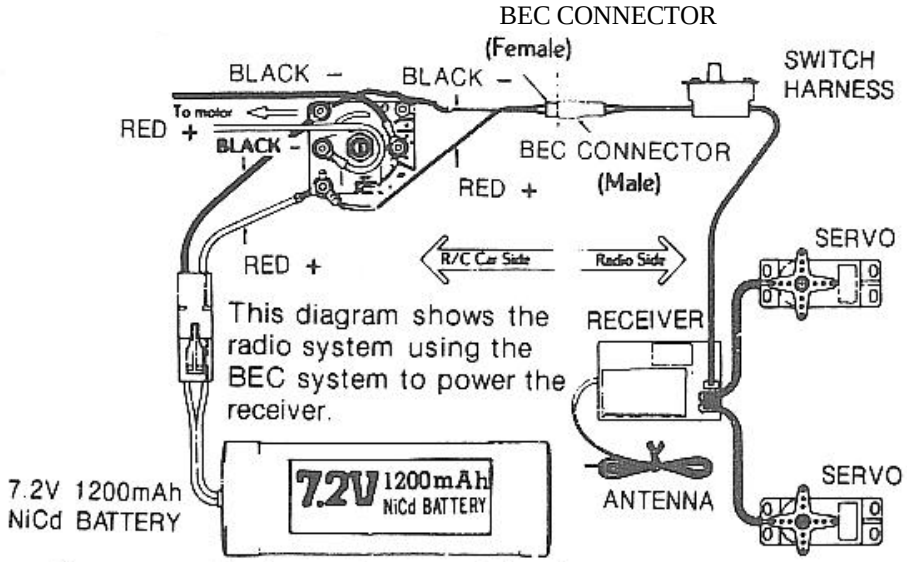
SPECIFICATIONS

- Control system : +pulse control, 1,310 µs(1,520 µs neutral)
- Operating angle : Rotary system, oneside 40° or greater(including trim)
- Power requirement : 4.8V or 6.0V(shared with receiver)
- Current drain : 6.0V, 6mA(at idle)
- Output torque : 42 oz-in(3kg-cm)
- Operating speed : 0.24 sec/60°
- Dimensions : 2" X 0.8" X 1.9" (52 X 20 X 49mm)
- Weight : 1.6 oz(50g)
- Water-resistant
- High impact case
- Indirect drive for gear train protection

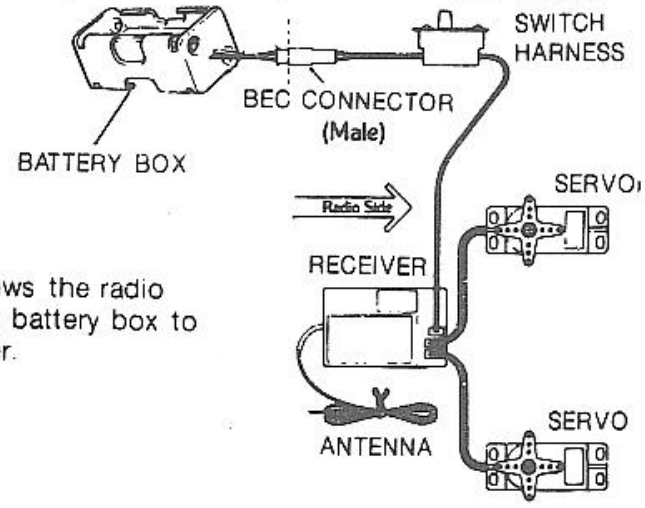
Jameco Part number

BEC INSTALLATION

What is BEC? BEC stands for Battery Eliminator Circuitry, which is exactly what it sounds like, a circuit that eliminates the need for a receiver battery.
The actual BEC circuitry lies within the receiver of your radio, not in your car/buggy Some car/buggies have circuits that do eliminate the need for a receiver battery. But most cars labeled "BEC EQUIPPED" simply include a BEC type connector that your radio's switch harness plugs into.
The basic difference between the two is how much voltage goes to the receiver. A BEC type receiver can accept an input voltage of 7.2V and higher, depending on the state of charge of the 6-cell battery, which is where the receiver and servos get their power. Your radio's switch harness has a BEC connector attached.
If the BEC connector is not already installed on the speed control, proper care should be taken when installing it. The polarity of the wires is very important and special attention should be given to get it correct. Remember to always connect Red(+) to Red(+) and Black(-) to Black(-). (Negative sides are not always black, sometimes they are white or other colors.) The BEC wires should be soldered on, where the battery wires go into the speed control.
Note if polarity is reversed, even for an instant, permanent damage to your receiver could result. BE CAREFUL.



If your car kit dose not come with a female BEC connector on the speed control, one can be purchased from your local hobby dealer.



Jameco Part number

PARTS & ACCESSORIES

A complete line of replacement parts and accessories is available from your hobby retailer for your HITEC Radio control system. When inquiring about these items, refer to the stock numbers shown directly to the left of items listed below.

*** SERVO**

- HS-300 : Standard top metal bearing servo
- HS-402Xa : High torgue servo
- HS-405 : High torque ball bearing servo
- HS-422 : Two oilless bearing standard servo
- HS-425 : Two ball bearing servo
- HS-101 : Mini servo

*** SPEED CONTROL & AUTO-CUT-OFF**

- SP-610RF : 6~10 AMPS, 2 way, speed control
- SP-1500 : 150 AMPS, brake, 2 way speed control, FET
- SP-1801 : Auto-cut-off, 180AMP continuous, F. E. T. one way
- SP-1802 : Brake, 150AMP continuous, F. E. T. one way
- SP-1002 : Auto-cut-off, Brake
- SP-1003 : Auto-cut-off, on-off control, BEC, Brake

*** CHARGER**

- CG-25 : (AC) Overninght charger
- CG-325 : (DC) Peak detection multi-chargea-matic(charging 4.8V-12V, 270-1800mA), battery efficiency tester, discharger
- CG-300 : AC/DC convertor

*** TRANSMITTER PARTS & ACCESSORIES**

- #8002 : TRANSMITTER ANTENNA
- #6371 : TRANSMITTER CHARGER CORD

*** RECEIVER PARTS & ACCESSORIES**

- #7201 : BATTERY BOX
- #7202 : SWITCH HARNESS
- #7203 : 7201 + 7202
- #7204 : B. E. C SYSTEM
- #7345 : "S"TYPE AILERON EXTENSION(12 INCH)
- #7346 : "S" TYPE-AILERON EXTENSION(24 INCH)
- #7347 : "S" TYPE AILERON EXTENSION(36 INCH)
- #7350 : "S" TYPE "Y" EXTENSION WIRE
- #7401 : "S" TYPE RECEIVER NICAD BATTERY PACK(4.8V)
- #8011 : RECEIVER ANTENNA
- #7372 : "S" TYPE RECEIVER CHARGER CORD

*** SERVO PARTS & ACCESSORIES**

- #6302 : TWO SERVO TRAY
- #6303 : THREE SERVO TRAY
- #6305 : FIVE SERVO TRAY
- #6315 : SERVO HORN SET
- #6336 : SERVO HORN WARE
- #6317 : SERVO HORN & HARD WARE SET
- #6325 : HS-300 SERVO GEAR SET
- #6329 : HS-300 SERVO CASE
- #6334 : HS-422, HS-425 SERVO GEAR SET
- #6333 : HS-402X, SERVO GEAR SET
- #6338 : HS-402X, SERVO CASE SET
- #6339 : HS-422, HS-425 SERVO CASE
- #7342 : "S" TYPE SERVO CONNECTOR
- #7343 : "S" TYPE FEMALE SERVO CONNECTOR